

IN THE CLAIMS

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1 1. (Original) An energy detect with auto pair select system, comprising:
2 a device that is operable to perform energy detection with auto pair selection;
3 a plurality of wire pairs that is communicatively coupled to the device; and
4 wherein the device generates a qualified energy by considering an energy associated with at least
5 two wire pairs within the plurality of wire pairs;
6 the device uses the qualified energy to determine whether at least one additional device is
7 communicatively coupled to the device via at least one wire pair within the plurality of wire pairs; and
8 the device performs auto power down when no device is communicatively coupled to the device
9 via the wire pair.

1 2. (Original) The energy detect with auto pair select system of claim 1, wherein the auto
2 power down comprises a partial auto power down.

1 3. (Original) The energy detect with auto pair select system of claim 1, wherein the device
2 performs auto media dependent interface crossover functionality when the wire pair is transposed with at
3 least one additional wire pair.

1 4. (Original) The energy detect with auto pair select system of claim 1, wherein the device
2 subtracts a link pulse energy from the energy when the device transmits a link pulse to generate the
3 qualified energy, the link pulse energy is associated with a link pulse that is transmitted from the device.

1 5. (Original) The energy detect with auto pair select system of claim 4, further comprising
2 an OR gate that sums energies on each of the plurality of wire pairs; and
3 an AND gate that suppresses the link pulse energy from the sum of the energies of each of the
4 plurality of wire pairs.

1 6. (Original) The energy detect with auto pair select system of claim 1, wherein the device
2 uses the energy of at least one wire pair within the plurality of wire pairs as the qualified energy when the
3 device does not transmit a link pulse.

1 7. (Original) The energy detect with auto pair select system of claim 1, wherein the plurality
2 of wire pairs comprises at least one of a receive wire pair and a transmit wire pair.

1 8. (Original) The energy detect with auto pair select system of claim 1, further comprising a
2 state machine that is operable to determine connectivity of the device with the plurality of wire pairs.

1 9. (Original) The energy detect with auto pair select system of claim 8, wherein the state
2 machine is operable to change an operational state of the device based on whether at least one additional
3 device is communicatively coupled to the device via at least one wire pair within the plurality of wire
4 pairs.

1 10. (Original) The energy detect with auto pair select system of claim 1, wherein the device
2 performs wake up from a standby state when the device determines that the at least one additional device
3 is communicatively coupled to the device via the wire pair.

1 11. (Original) An energy detect with auto pair select system, comprising:
2 a device that is operable to perform energy detection with auto pair selection;
3 a wire pair that is communicatively coupled to the device; and
4 wherein the device determines whether the wire pair comprises an energy;
5 the device subtracts a link pulse energy from the energy when the device transmits a link pulse to
6 generate a qualified energy, the link pulse energy is associated with a link pulse that is transmitted from
7 the device;
8 the device uses the energy as the qualified energy when the device does not transmit a link pulse;
9 and
10 the device uses the qualified energy to determine whether at least one additional device is
11 communicatively coupled to the device via the wire pair.

1 12. (Original) The energy detect with auto pair select system of claim 11, wherein the device
2 performs auto media dependent interface crossover functionality when the wire pair is transposed with at
3 least one additional wire pair.

1 13. (Original) The energy detect with auto pair select system of claim 12, wherein the device
2 performs the auto media dependent interface after determining whether the at least one additional device
3 is communicatively coupled to the device via the wire pair.

1 14. (Original) The energy detect with auto pair select system of claim 11, wherein the device
2 performs auto power down when no device is communicatively coupled to the device via the wire pair.

1 15. (Original) The energy detect with auto pair select system of claim 14, wherein the auto
2 power down comprises a partial auto power down.

1 16. (Original) The energy detect with auto pair select system of claim 11, wherein the device
2 performs wake up from a standby state when the device determines that the at least one additional device
3 is communicatively coupled to the device via the wire pair.

1 17. (Original) The energy detect with auto pair select system of claim 11, wherein the device
2 comprises a state machine that is operable to change an operational state of the device based on whether
3 the at least one additional device is communicatively coupled to the device via the wire pair.

1 18. (Original) The energy detect with auto pair select system of claim 11, further comprising
2 at least one additional wire pair; and
3 wherein the device sums energy on the wire pair and energy on the at least one additional wire
4 pair.

1 19. (Original) The energy detect with auto pair select system of claim 18, wherein the wire
2 pair comprises at least one of a transmit pair and a receive pair; and
3 the at least one additional pair comprises at least one of a transmit pair and a receive pair.

1 20. (Original) An energy detect with auto pair select system, comprising:
2 a device that is operable to perform energy detection with auto pair selection;
3 a plurality of wire pairs that is communicatively coupled to the device;
4 a state machine that is operable to determine connectivity of the device; and
5 wherein the device performs auto media dependent interface crossover functionality when at least
6 two wire pairs within the plurality of wire pairs are transposed;
7 the device determines whether at least one wire pair within the wire pair comprises an energy;
8 the device subtracts a link pulse energy from the energy, when the device transmits a link pulse,
9 to generate a qualified energy, the link pulse energy is associated with a link pulse that is transmitted from
10 the device;
11 the device uses the energy as the qualified energy when the device does not transmit a link pulse;
12 the device provides the qualified energy to the state machine;
13 the state machine determine whether at least one additional device is communicatively coupled to
14 the device via the wire pair; and
15 the device performs energy savings management.

1 21. (Original) The energy detect with auto pair select system of claim 20, wherein the state
2 machine is contained within the device.

1 22. (Original) The energy detect with auto pair select system of claim 20, wherein the device
2 is operable within at least one of a standby state and an awake state as determined by the state machine.

1 23. (Original) The energy detect with auto pair select system of claim 20, wherein the device
2 performs auto power down when the device determines that no device is communicatively coupled to the
3 device via the wire pair.

1 24. (Original) The energy detect with auto pair select system of claim 20, further comprising
2 an OR gate that sums energies on each of the plurality of wire pairs; and
3 an AND gate that suppresses the link pulse energy from the sum of the energies of each of the
4 plurality of wire pairs.

1 25. (Original) An energy detect with auto pair select method, the method comprising:
2 performing energy detection of a plurality of wire pairs, at least one wire pair within the plurality
3 of wire pairs is communicatively coupled to a device;
4 generating a qualified energy by considering an energy associated with at least two wire pairs
5 within the plurality of wire pairs;
6 determining whether at least one additional device is communicatively coupled to the device via
7 at least one wire pair within the plurality of wire pairs; and
8 performing auto power down when no device is communicatively coupled to the device via the
9 wire pair.

1 26. (Original) The method of claim 25, further comprising performing auto negotiation
2 between the device and at least one additional device.

1 27. (Original) The method of claim 25, further comprising waking up the device from a
2 standby state.

1 28. (Original) The method of claim 25, wherein the auto power down comprises a partial
2 auto power down.

1 29. (Original) The method of claim 25, further comprising performing auto media dependent
2 interface crossover functionality when the wire pair is transposed with at least one additional wire pair.

1 30. (Original) The method of claim 25, further comprising summing energies on each of the
2 plurality of wire pairs; and
3 suppressing energy associated with a transmitted link pulse from the sum of the energies of each
4 of the plurality of wire pairs, the transmitted link pulse being transmitted from a device.

1 31. (Original) The method of claim 25, further comprising using the energy of at least one
2 wire pair within the plurality of wire pairs as the qualified energy when the device does not transmit a link
3 pulse.

1 32. (Original) The method of claim 25, wherein the plurality of wire pairs comprises at least
2 one of a receive wire pair and a transmit wire pair.

1 33. (Original) The method of claim 25, further comprising employing a state machine to
2 determine connectivity of the device with the plurality of wire pairs.

1 34. (Original) The method of claim 33, wherein the state machine is operable to change an
2 operational state of the device based on whether at least one additional device is communicatively
3 coupled to the device via at least one wire pair within the plurality of wire pairs.

1 35. (Original) The method of claim 25, wherein the device performs wake up from a standby
2 state when the device determines that the at least one additional device is communicatively coupled to the
3 device via the wire pair.

1 36. (Original) An energy detect with auto pair select method, the method comprising:
2 performing energy detection with auto pair selection on a device having a wire pair
3 communicatively coupled thereto;
4 determining whether the wire pair comprises an energy;
5 subtracting a link pulse energy from the energy, when the device transmits a link pulse, to
6 generate a qualified energy, the link pulse energy is associated with a link pulse that is transmitted from
7 the device;
8 using the energy as the qualified energy when the device does not transmit a link pulse; and
9 using the qualified energy to determine whether at least one additional device is communicatively
10 coupled to the device via the wire pair.

1 37. (Original) The method of claim 36, further comprising performing auto media dependent
2 interface crossover functionality when the wire pair is transposed with at least one additional wire pair.

1 38. (Original) The method of claim 37, further comprising performing the auto media
2 dependent interface after determining whether the at least one additional device is communicatively
3 coupled to the device via the wire pair.

1 39. (Original) The method of claim 36, further comprising performing auto power down
2 when no device is communicatively coupled to the device via the wire pair.

1 40. (Original) The method of claim 39, wherein the auto power down comprises a partial
2 auto power down.

1 41. (Original) The method of claim 36, further comprising waking up the device from a
2 standby state after determining that the at least one additional device is communicatively coupled to the
3 device via the wire pair.

1 42. (Original) The method of claim 36, further comprising employing a state machine to
2 change an operational state of the device based on whether the at least one additional device is
3 communicatively coupled to the device via the wire pair.

1 43. (Original) The method of claim 36, wherein at least one additional wire pair is
2 communicatively coupled to the device; and
3 further comprising summing energy on the wire pair and energy on the at least one additional
4 wire pair.

1 44. (Original) The method of claim 43, wherein the wire pair comprises at least one of a
2 transmit pair and a receive pair; and
3 the at least one additional pair comprises at least one of a transmit pair and a receive pair.